

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	446	(353/20).CCLS.	USPAT	OR	OFF	2005/03/22 07:46
L2	651	(353/31).CCLS.	USPAT	OR	OFF	2005/03/22 07:46
L3	291	(353/97).CCLS.	USPAT	OR	OFF	2005/03/22 07:46
L4	165	(359/250).CCLS.	USPAT	OR	OFF	2005/03/22 07:46
L5	98	(359/253).CCLS.	USPAT	OR	OFF	2005/03/22 07:46
L6	139	(359/256).CCLS.	USPAT	OR	OFF	2005/03/22 07:46
L7	395	(359/487).CCLS.	USPAT	OR	OFF	2005/03/22 07:47
L8	504	(359/495).CCLS.	USPAT	OR	OFF	2005/03/22 07:47
L9	469	(359/497).CCLS.	USPAT	OR	OFF	2005/03/22 07:47
L10	733	(359/618).CCLS.	USPAT	OR	OFF	2005/03/22 07:47
L11	727	(359/619).CCLS.	USPAT	OR	OFF	2005/03/22 07:48
L12	30	@pd>="20041021" AND L1	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:48
L13	52	@pd>="20041021" AND L2	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:49
L14	6	@pd>="20041021" AND L3	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:49
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L18	9	@pd>="20041021" AND L7	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:49
L19	15	@pd>="20041021" AND L8	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:49
L20	21	@pd>="20041021" AND L9	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:50
L21	23	@pd>="20041021" AND L10	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:50
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L23	14	@pd>="20041021" AND ((((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (align\$3 same polarization\$1 same direction\$1)) and (light near3 (shield\$3 shad\$3 block\$3 obscur\$4 absorb\$3 cover\$3))) and (align\$3 same (phase\$1plate\$1 (phase adj plate\$1) wave\$1plate\$1 (wave adj plate\$1))))))	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:50
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L26	9	@pd>="20041021" AND ((((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (align\$3 same polarization\$1 same direction\$1)) and (light near3 (shield\$3 shad\$3 block\$3 obscur\$4 absorb\$3 cover\$3))) and (align\$3 same (phase\$1plate\$1 (phase adj plate\$1) wave\$1plate\$1 (wave adj plate\$1)))))) and (reflect\$3 near2 (plane surface\$1))) and modulat\$3) and (project\$3 near2 (lens optic\$2)))	US-PGPUB; USPAT	OR	OFF	2005/03/22 07:52
L27	0	@pd>="20041021" AND ((((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (align\$3 same polarization\$1 same direction\$1)))	EPO; JPO; DERWENT	OR	OFF	2005/03/22 07:52
L28	2	@pd>="20041021" AND ((((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (light near3 (shield\$3 shad\$3 block\$3 obscur\$4 absorb\$3 cover\$3)))	EPO; JPO; DERWENT	OR	OFF	2005/03/22 07:53
L29	2	@pd>="20041021" AND ((((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (light near3 (shield\$3 shad\$3 block\$3 obscur\$4 absorb\$3 cover\$3)))	EPO; JPO; DERWENT	OR	OFF	2005/03/22 07:53

09/987,953



L30	0	@pd>="20041021" AND (((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (align\$3 same (phase\$1plate\$1 (phase adj plate\$1) wave\$1plate\$1 (wave adj plate\$1))))))	EPO; JPO; DERWENT	OR	OFF	2005/03/22 07:54
L31	0	@pd>="20041021" AND (((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (align\$3 same polarization\$1 same direction\$1)) and modulat\$3)	EPO; JPO; DERWENT	OR	OFF	2005/03/22 07:54
L32	0	@pd>="20041021" AND (((((polariz\$3 polarization) near2 conver\$4) same reflect\$3) and (light near3 (shield\$3 shad\$3 block\$3 obscur\$4 absorb\$3 cover\$3))) and modulat\$3)	EPO; JPO; DERWENT	OR	OFF	2005/03/22 07:54
L33	0	@pd>="20041021" AND ITOH-Yoshitaka.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/22 07:55

09/987,953





# **STIC Search Report**

**EIC 2800**

**STIC Database Tracking Number 148419**

**TO: David Spector**  
**AU 2873**  
**Location: JEF-3C03**  
**3/22/05**  
**09/987,953**

**From: Jeff Harrison**  
**Location: STIC-EIC2800**  
**JEF-4B68**  
**Phone: 22511**

**Email: harrison, jeff**

## **Search Notes**

**Re: US 5,986,809**

**Litigation-search results are attached.**

**No US litigation was found in searches of Lexis-Nexis, Courtlink, and Questel-Orbit databases.**

**Based on this, if you have questions or comments, let me know.**

**Respectfully,**  
**Jeff Harrison**



Day : Tuesday  
Date: 3/22/2005  
Time: 15:10:31

# **PALM INTRANET**

## **Application Number Information**

Application Number: **09/029080** **Assignments**

Filing or 371(c) Date: **02/20/1998**

Effective Date: **02/20/1998**

Application Received: **02/20/1998**

Patent Number: **5986809**

Issue Date: **11/16/1999**

Date of Abandonment: **00/00/0000**

Attorney Docket Number: **JAO39504**

Status: **150 /PATENTED CASE**

Confirmation Number: **5624**

Examiner Number: **75502 / LETENDRE, SUSANNE**

Group Art Unit: **2873**

Class/Subclass: **359/618.000**

Lost Case: **NO**

Interference Number:

Unmatched Petition: **NO**

L&R Code: Secrecy Code: **1**

Third Level Review: **NO**

Secrecy Order: **NO**

Status Date: **11/08/1999**

Oral Hearing: **NO**

Title of Invention: **POLARIZATION CONVERSION ELEMENT, POLARIZATION ILLUMINATOR, DISPLAY USING THE SAME ILLUMINATOR, AND PROJECTION TYPE DISPLAY**

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
09029080	28M1	03/14/2005	28E1	No Charge to Name	NGO, CHAU	JEF/00/C 05

Appln  
Info

**Contents**

**Petition Info**

**Atty/Agent Info**

**Continuity Data**

**Foreign Data**

**Inventors**

**Address**

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**Search**

or Patent#

**Search**

PCT /

**Search**

or PG PUBS #

**Search**

Attorney Docket #

**Search**

Bar Code #

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Day : Tuesday  
Date: 3/22/2005  
Time: 15:10:25

**PALM INTRANET**

# Continuity Information for 09/987953

## Parent Data

09987953

is a reissue of 09029080

is a national stage entry of PCT/JP97/02189 International Filing Date: 06/25/1997

## Child Data

No Child Data

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**Continuity  
Data**

[Foreign Data](#)

[Inventors](#)

[Address](#)

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# PALM INTRANET

Day : Tuesday  
Date: 3/22/2005  
Time: 15:10:08

## Application Number Information

Application Number: <b>09/987953</b>	<u><b>Assignments</b></u>	Examiner Number: <b>76435 / SPECTOR, DAVID</b>
Filing or 371(c) Date: <b>11/16/2001</b>		Group Art Unit: <b>2873</b> <b>IFW IMAGE</b>
Effective Date: <b>11/16/2001</b>		Class/Subclass: <b>359/618.000</b>
Application Received: <b>11/16/2001</b>		Lost Case: <b>NO</b>
Patent Number:		Interference Number:
Issue Date: <b>00/00/0000</b>		Unmatched Petition: <b>NO</b>
Date of Abandonment: <b>00/00/0000</b>		L&R Code: Secrecy Code:1
Attorney Docket Number: <b>039504.99</b>		Third Level Review: <b>NO</b>
Status: <b>71 /RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER</b>		Secrecy Order: <b>NO</b>
Confirmation Number: <b>7957</b>		Status Date: <b>03/16/2005</b>
		Waiting for Response Desc. <u><b>Mail ExPQuayle</b></u>
		Oral Hearing: <b>NO</b>
Title of Invention: <b>POLARIZATION CONVERSION ELEMENT, POLARIZATION ILLUMINATOR, DISPLAY USING THE SAME ILLUMINATOR, AND PROJECTOR</b>		

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
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## Litigation involving patent 5,986,809

Click on the docket number to view the docket.  
Click on the above patent number to view the patent.

▼ Docket ▲ ▼ Case Heading ▲ ▼ Date Filed ▲ ▼ Date Retrvd ▼

**There are no cases involving this patent number.**



Source: Legal > / ... / > Utility Patents 

Terms: 5,986,809 or 5986809 ([Edit Search](#))

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029080 (09) 5986809 November 16, 1999

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

**5986809**

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[Link to Claims Section](#)

November 16, 1999

Polarization conversion element, polarization illuminator, display using the same illuminator, and projection type display

**REISSUE:** Reissue Application filed Nov. 16, 2001 (O.G. Feb. 5, 2002) Ex. Gp.: 2873; Re. S.N. 09/987,953, (O.G. February 5, 2002)

**INVENTOR:** Itoh, Yoshitaka - Suwa, Japan (JP); Hashizume, Toshiaki - Suwa, Japan (JP)

**APPL-NO:** 029080 (09)

**FILED-DATE:** February 20, 1998

**GRANTED-DATE:** November 16, 1999

**PRIORITY:** June 25, 1997 - 8165006, Japan (JP)

**ASSIGNEE-AT-ISSUE:** Seiko Epson Corporation, Tokyo, Japan (JP), 03

**ASSIGNEE-AFTER-ISSUE:** February 20, 1998 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS), SEIKO EPSON CORPORATION 4-1, NISHISHINJUKU 2-CHOME SHINJUKU-KU, TOKYO 163 JAPAN, Reel and Frame Number: 09111/0714

**LEGAL-REP:** Oliff & Berridge, PLC

**PUB-TYPE:** November 16, 1999 - Utility Patent having no previously published pre-grant publication (A)

**PUB-COUNTRY:** United States (US)

**PCT-APPL-NO:** JP9702189

**PCT-PUB-PAT-NO:** WO 97/500122

**PCT-PUB-DATE:** December 31, 1997

**SECT-371-DATE:** February 20, 1998

**SECT-102-E-DATE:** February 20, 1998





## Extended Family Search Results

US5986809/PN Results : 2

### PATENT FAMILY

#	Patent No.	Kind	Date	Applic.No.	Date
1)	WO9750012	A1	19971231	1997WO-JP02189	19970625
	EP-848274	A1	19980617	1997EP-0928456	19970625
	CN1196802	A	19981021	1997CN-0190776	19970625
	EP-848274	A4	19990922		
	US5986809	A	19991116	1998US-0029080	19980220
	EP-848274	B1	20020911		
	DE69715359	D1	20021017	1997DE-6015359	19970625
	DE69715359	T2	20030102		
	CN1108532C	C	20030514		
	JP2004185033	A	20040702	2004JP-0038298	20040216
2)	JP10339011	A	19981222	1997JP-0165006	19970606
	US6154320	A	20001128	1999US-0372034	19990811

#### Priority :

1996JP-0165006	19960625
1997JP-0165006	19970606
1997WO-JP02189	19970625
1998US-0029080	19980220
1999US-0372034	19990811
2004JP-0038298	20040216



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FAN - 20042781939956

PN - WO9750012 A1 19971231 [WO9750012]  
 STG: Publ. Of int. Appl. With int. Search rep  
 AP : 1997WO-JP02189 19970625  
 EP0848274 A1 19980617 [EP-848274]  
 STG: Public. Of applic. With search report  
 AP : 1997EP-0928456 19970625  
 CN1196802 A 19981021 [CN1196802]  
 STG: Unexamined application  
 AP : 1997CN-0190776 19970625  
 EP0848274 A4 19990922 [EP-848274]  
 STG: Publ. Of suppl. search report  
 US5986809 A 19991116 [US5986809]  
 STG: United States patent  
 AP : 1998US-0029080 19980220  
 FD : PCT/JP97/02189 19970625 [1997WO-JP02189]  
 FD : WO97/50012 19971231 [WO9750012]  
 EP0848274 B1 20020911 [EP-848274]  
 STG: Patent  
 DE69715359 D1 20021017 [DE69715359]  
 STG: Granted EP number in bulletin  
 AP : 1997DE-6015359 19970625  
 DE69715359 T2 20030102 [DE69715359]  
 STG: Trans. Of EP patent



CN1108532 C 20030514 [CN1108532C]

STG: Granted patent

 JP2004185033 A 20040702 [JP2004185033]

STG: Doc. Laid open to publ. Inspec.

AP : 2004JP-0038298 20040216

TI - POLARIZATION CONVERSION ELEMENT, POLARIZATION ILLUMINATOR, DISPLAY USING THE SAME ILLUMINATOR, AND PROJECTION TYPE DISPLAY

PA - HASHIZUME TOSHIAKI  
ITOY YOSHITAKA  
SEIKO EPSON CORP

PA0 - Seiko Epson Corporation, Tokyo [JP]

IN - ITOY YOSHITAKA; HASHIZUME TOSHIAKI

PR - 1996JP-0165006 19960625; 1997JP-0165006 19970606; 1997WO-JP02189 19970625 ; 2004JP-0038298 20040216

IC - G02B-027/28

EC - G02B-027/28B  
G02B-027/28B1

ICO - S02F-001/1335P5

PCL - ORIGINAL (O) : 359618000; CROSS-REFERENCE (X) : 359495000 359497000

DS - (EP-848274)  
DE FR GB

DS - (WO9750012)  
CN JP KR US European Patent (AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE)

UP - 2000-08

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1 / 4 LEGALI - ©EPO

PN - DE69715359 D1 20021017 [DE69715359]DE69715359 T2 20030102 [DE69715359]

AP - DE69715359 19970625 [1997DE-6015359]

ACT - 20031009 DE/8364-A [+]  
NO OPPOSITION DURING TERM OF OPPOSITION  
EINSPRUCHSFRIST ABGELAUFEN OHNE DASS EINSPRUCH ERHOBEN WURDE

UP - 2003-41

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2 / 4 LEGALI - ©EPO

PN - US5986809 A 19991116 [US5986809]

AP - US2908098 19980220 [1998US-0029080]

ACT - 20020205 US/RF-A  
REISSUE APPLICATION FILED  
EFFECTIVE DATE: 20011116

UP - 2003-22

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3 / 4 LEGALI - ©EPO

PN - WO9750012 A1 19971231 [WO9750012]

AP - WOJP9702189 19970625 [1997WO-JP02189]

ACT - 19971231 WO/AK [+]  
DESIGNATED STATES CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT  
CN JP KR US

19971231 WO/AL [+]  
DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT  
AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

19980422 WO/121  
EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION



UP - 2003-22

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4/4 LEGALI - ©EPO

PN - EP0848274 A1 19980617 [EP-848274]EP0848274 A4 19990922 [EP-848274]EP0848274 B1 20020911 [EP-848274]

AP - EP97928456 19970625 [1997EP-0928456]

ACT - 19980617 EP/AK-A [+]  
DESIGNATED CONTRACTING STATES:  
BENANNTE VERTRAGSSTAATEN  
DE FR GB

19980826 EP/17P-A [+]  
REQUEST FOR EXAMINATION FILED  
PRUEFUNGSANTRAG GESTELLT  
EFFECTIVE DATE: 19980625

19990922 EP/AK-A [+]  
DESIGNATED CONTRACTING STATES:  
BENANNTE VERTRAGSSTAATEN  
DE FR GB

19990922 EP/A4-A [+]  
SUPPLEMENTARY SEARCH REPORT  
ERGAENZENDER RECHERCHENBERICHT  
EFFECTIVE DATE: 19990811

20001102 EP/17Q-A [+]  
FIRST EXAMINATION REPORT  
ERSTER PRUEFUNGSBESCHIED  
EFFECTIVE DATE: 20000918

20020911 EP/AK-A [+]  
DESIGNATED CONTRACTING STATES:  
BENANNTE VERTRAGSSTAATEN  
DE FR GB

20020911 EP/REG-A; GB/FG4D [+]  
GB: EUROPEAN PATENT GRANTED  
<GB>

20021017 EP/REF-A  
CORRESPONDS TO:  
ENTSPRICHT  
(DE 69715359 20021017 [DE69715359])

20030117 EP/ET-A [+]  
FR: TRANSLATION FILED  
FR: TRADUCTION A ETE REMISE

20030903 EP/26N-A [+]  
NO OPPOSITION FILED  
KEIN EINSPRUCH EINGELEGT  
EFFECTIVE DATE: 20030612

UP - 2003-39




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FAN - 20042790376270

PN - JP10339011 A 19981222 [JP10339011]  
STG: Doc. Laid open to publ. Inspec.  
AP : 1997JP-0165006 19970606



 US6154320 A 20001128 [US6154320]

**STG:** United States patent

**AP:** 1999US-0372034 19990811

**FD:** Cont. of US029080 19980220 [1998US-0029080]

**FD:** Continuation of: US5986809 - 19991116

**TI** - Polarizing conversion device, polarizing illuminations device, and display apparatus and projector using the devices

**PA** - ENOMOTO KINZOKU KK  
SEIKO EPSON CORP  
TAKADA NOBUO

**PA0** - Seiko Epson Corporation, Tokyo [JP]

**IN** - ITOH YOSHITAKA; HASHIZUME TOSHIAKI

**PR** - 1997JP-0165006 19970606; 1998US-0029080 19980220; 1999US-0372034 19990811

**IC** - G02B-005/30 G02B-027/10 G02B-027/14 G03B-021/00 G03B-021/14

**EC** - G02B-027/28B  
G02B-027/28B1  
H04N-009/31V

**PCL** - ORIGINAL (O) : 359629000; CROSS-REFERENCE (X) : 353020000 353031000 353097000 359483000  
359485000 359618000 359619000

**UP** - 2000-49

Search statement 2

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Query/Command : prt fu legalall max


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PN -  US5986809 A 19991116 [US5986809]  
 TI - (A) Polarization conversion element, polarization illuminator, display using the same illuminator, and projection type display  
 PA - (A) SEIKO EPSON CORP (JP)  
 PA0 - Seiko Epson Corporation, Tokyo [JP]  
 IN - (A) ITOH YOSHITAKA (JP); HASHIZUME TOSHIKI (JP)  
 AP - US2908098 19980220 [1998US-0029080]  
 FD - PCT/JP97/02189 19970625 [1997WO-JP02189]  
 WO97/50012 19971231 [WO9750012]  
 PR - JP16500697 19970606 [1997JP-0165006]  
 WOJP9702189 19970625 [1997WO-JP02189]  
 IC - (A) G02B-005/30 G02B-027/10  
 EC - G02B-027/28B  
 G02B-027/28B1  
 H04N-009/31V  
 PCL - ORIGINAL (O) : 359618000; CROSS-REFERENCE (X) : 359495000 359497000  
 DT - Basic  
 CT - US3788740; US5387991; US5528720; US5555186; JP3256025 A; JP572417 A; JP5107505 A; JP618714 A; JP6202046 A; JP7294906 A; JP8114765 A  
 STG - (A) United States patent  
 AB - PCT No. PCT/JP97/02189 Sec. 371 Date Feb. 20, 1998 Sec. 102(e) Date Feb. 20, 1998 PCT Filed Jun. 25, 1997 PCT Pub. No. WO97/50012 PCT Pub. Date Dec. 31, 1997A polarizing conversion device in accordance with the invention includes a first optical element for condensing an incident beam and forming a plurality of intermediate beams spatially separated from one another, and a second optical element for spatially separating each intermediate beam into two polarized beams and aligning the polarization directions of the polarized beams, thereby obtaining the same type of polarized beams. In the second optical element, a shading plate is placed to prevent light from directly entering a section corresponding to a reflecting plane of a polarizing separation unit array. Since the ability of separating the intermediate beam into two polarized beams is thereby enhanced, it is possible to perform conversion into the same type of polarized beams polarized in the same direction, with high efficiency.


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1 / 1 LGST - ©EPO

PN -  US5986809 A 19991116 [US5986809]  
 AP - US2908098 19980220 [1998US-0029080]  
 ACT - 20020205 US/RF-A  
 REISSUE APPLICATION FILED  
 EFFECTIVE DATE: 20011116  
 UP - 2003-22

---

1 / 1 CRXX - ©CLAIMS/RRX

AN - 3238104  
 PN -  5,986,809 D 19991116 [US5986809]  
 PA - Seiko Epson Corp JP  
 PT - E (Electrical)  
 ACT - 20011116 REISSUE REQUESTED  
 ISSUE DATE OF O.G.: 20020205  
 REISSUE REQUEST NUMBER: 09/987953  
 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2873

Reissue Patent Number:



UP - 2002-06  
UACT - 2002-02-05

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Use connectors to show relationship between search terms. (Hover over connector for description. Click a connector to add to search.)

Syntax	Definition
and	and
or	or
w/N	within N words
not w/N	not within N words
pre /N	precedes by N words
w/p	in same paragraph
not w/p	not in same paragraph
w/seg	in same segment
not w/seg	not in same segment
w/s	in same sentence
not w/s	not in same sentence
and not	and not
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### Enter Search Terms

☒ **Terms and Connectors** ☐ **Natural Language**

5,986,809 or 5986809

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### Restrict by Segment:

Select a segment, enter search terms for the segment, then click Add.

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Note: Segment availability differs between sources. Segments may not be applied consistently across sources.

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Terms and Connectors Natural Language

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#### Syntax Definition

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<a href="#">and not</a>	and not
<a href="#">View Search Command</a>	